

Spanish Cruise (spring 2012)

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Cruise ES-SPURS-1

**Part of Spanish SMOS project:
"MIDAS-6: Ocean Salinity and Soil
Moisture Products from SMOS:
Improvements and Applications"**

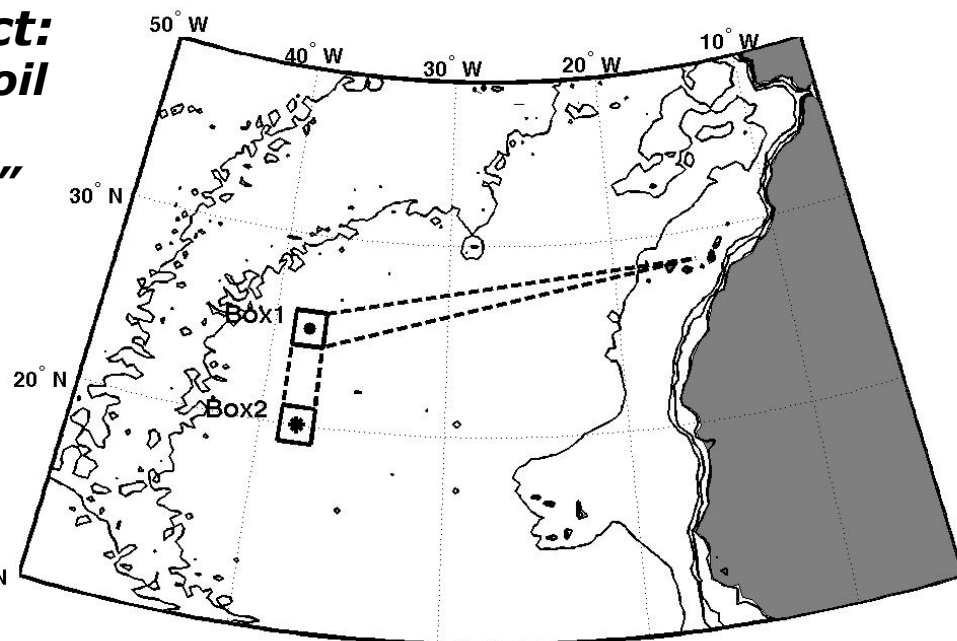
proposal presented Feb 2010

**32-day cruise penciled in for
21 March-21 April 2012**

Departure: Canary Islands

**Two proposed main
sampling regions
centered around**

**20N 38W and
25N 38W**



R/V Sarmiento de Gamboa

Sarmiento de Gamboa

- **Global (not polar)**
- **Overall length: 70.5 meters**
- **Endurance: 40 days**
- **Maximum speed: 15 knots**
- **Crew 16 / Scientists 26**
- **8000m depth deployment ability**

**DOES IT MEET THE REQUIREMENTS
FOR SPURS?**



http://www.utm.csic.es/doc/bo_sarmiento_de_gamboa/especificaciones/Brochure_SdGamboa.pdf

SPURS Planning Meeting, Boston, Feb. 22-24, 2011

Cruise ES-SPURS-1

Very preliminary cruise plan included
Considering spring 2012 was to be the first cruise, most of the
equipment deployment from white paper was proposed:

- **Mooring at 25N 38W**
- **gliders**
- **drifters**
- **profilers**
- **CTD stations...**

NOT NECESSARILY
THE CASE!

Questions:
Who?

- **We have 8-10 ICM people**
- **~16 remaining scientist?**

When?

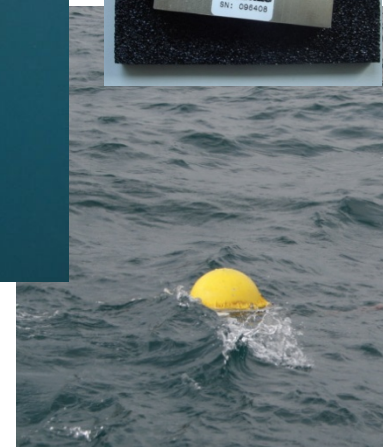
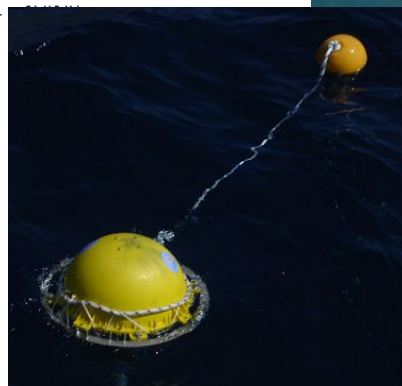
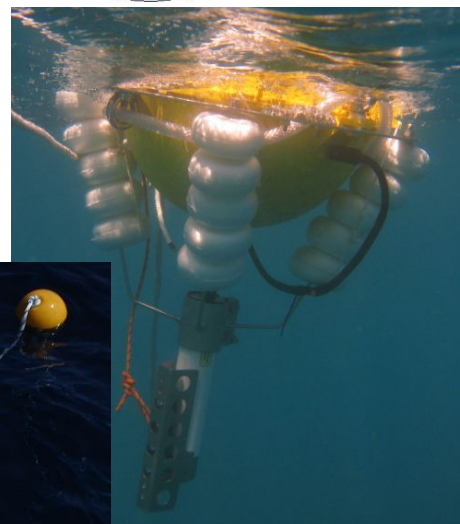
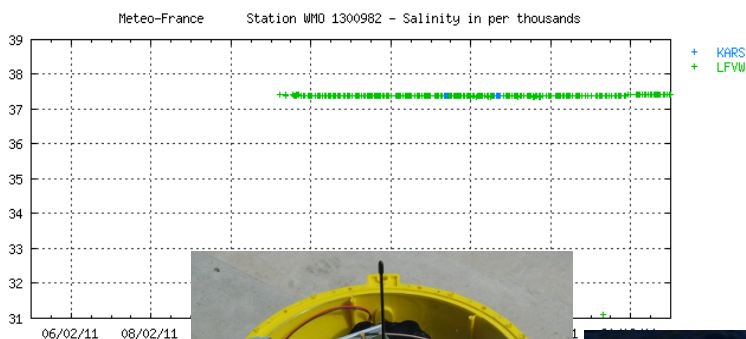
- **scheduled for spring**
- **final dates in 2-3 months**
- **issues with budget**
- **slight possibility of delay**

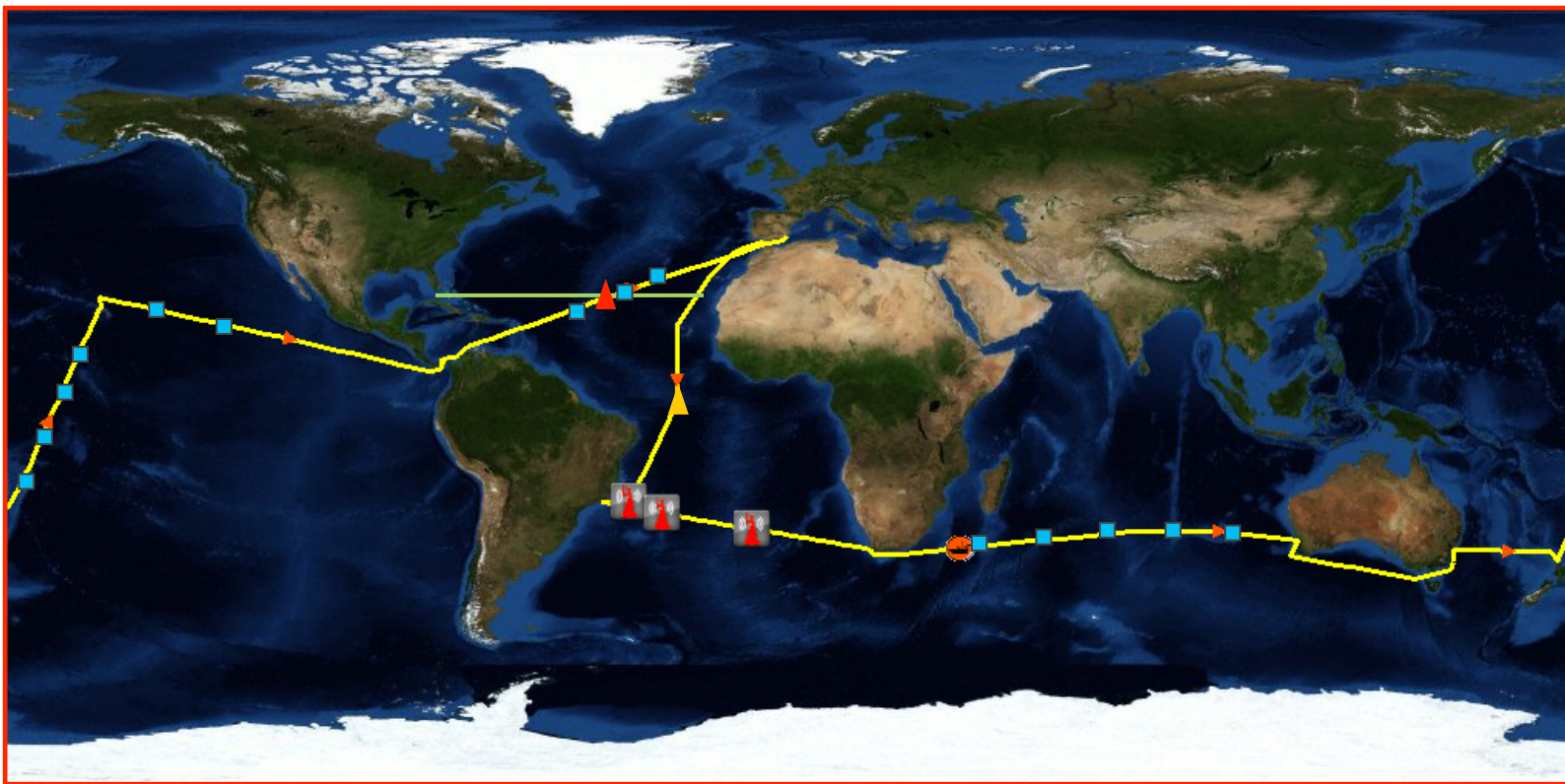
← Las Palmas to 25N 38W (120h)					Sea-glider, ARGO, drifters, swath survey	short-term gliders, ASIP, seasoar, CTD (Box1)
short-term gliders, ASIP, seasoar, CTD (Box1)	seasoar, CTD (Box1), swath survey	seasoar, CTD (Box1), swath survey	Flux buoy deploy	flux compar., seaglider, CTD (Box1)	seaglider, seasoar, CTD (Box1)	seaglider, seasoar, CTD (Box1)
seaglider, seasoar, CTD (Box1)	Route to 20N 38W, seasoar, CTD	Route to 20N 38W, seaglider, seasoar, CTD	seaglider, seasoar, CTD (Box2)	seaglider, seasoar, CTD (Box2)	Check/ refurbish PIRATA st., seaglider, (Box2)	ARGO, drifters, seasoar, CTD (Box2)
seaglider, seasoar, CTD (Box2)	Route to 25N 38W, seaglider, seasoar, CTD	Route to 25N 38W, seasoar, CTD	Route to 25N 38W, seasoar, CTD	Recovery of ASIP, short-term gliders	Recovery of ASIP, short-term gliders	←...
25N 38W to Las Palmas (120h) →						

Lagrangian surface drifters designed to measure surface temperature and salinity (SBE37) for SMOS SSS products validation.

40cm sphere with sensor at 0.5m

Availability of 10-15 drifters for 2012 field season





Yellow: Hesperides, Dec. 2010 – July 2011

Green: Sarmiento de Gamboa, Feb.- March 2011

▲ deployed, ■ planned (ICM units); ▲ deployed (PacificGyre, LOCEAN)

NEMO v3.3 (OPA)

proposed 75 vertical levels $1/16^\circ$ resolution

Ensemble Kalman Filter/Smoothen to assimilate:

- **SMOS & Aquarius SSS**
- **satellite SST, SSH**
- **cruise observations**
- **in-situ T, S**
(ARGO, mooring, drifters, gliders,...)

**led by Quim Ballabrera
(UTM-CSIC)**

**additionally, analysis of operational
simulations (HYCOM, Mercator, ECCO...)**

